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(54) Title: METHODS FOR RAPID IDENTIFICATION OF PATHOGENS IN HUMANS AND ANIMALS

(57) Abstract: The present invention provides methods of: identifying pathogens in biological samples from humans and animals, resolving a plurality of etiologic agents present in samples obtained from humans and animals, determining detailed genetic information about such as pathogens or etiologic agents, and rapid detection and identification of bioagents from environmental, clinical or other samples.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/38830

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68; C12P 19/34; C07H 21/02; G01N 33/48
US CL : 435/6, 91.2, 536/23.1, 24.3; 702/19

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 91.2, 536/23.1, 24.3; 702/19

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,268,144 B1 (KOSTER) 31 July 2001 (31.07.2001), see columns 17 and 18.	1-7, 9-19
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Y		8, 20-22
X	MUDDIMAN et al. Characterization of PCR products from Bacilli using electrospray ionization FTICR Mass spectrometry. Anal. Chem. 01 November 1996, Vol. 68, No. 21, pages 3705-3712, see entire document.	1-9, 12-19
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Y		10, 11, 20-22
X	HURST et al. MALDI-TOF analysis of polymerase chain reaction products from methanotrophic bacteria. Anal. Chem. 01 July 1998, Vol. 70, No. 13, pages 2693-2698, see entire document.	1-9, 12-19
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Y		10, 11, 20-22
Y	LACROIX et al. PCR-based technique for the detection of bacteria in semen and urine. J. Microbiol. Meth. 1996, Vol. 26, pages 61-71, see entire document.	10, 11
Y	YAO et al. Mass spectrometry based proteolytic mapping for rapid virus identification. Anal. Chem. 01 June 2002, Vol. 74, No. 11, pages 2529-2534, see page 2530, column 2, subheading "Database construction and query".	20-22

<input checked="" type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	VAN BAAR et al. Characterization of bacteria by matrix assisted laser desorption/ionisation and electrospray mass spectrometry. FEMS Microbiol. Reviews. 2000, Vol. 24, pages 195-219, see entire document.	1-22

INTERNATIONAL SEARCH REPORT

PCT/US03/388

Continuation of B. FIELDS SEARCHED Item 3:

EAST, MEDLINE, BIOSIS, CAPLUS

search terms: DNA, nucleic, oligonucleotide, primer, probe, RNA, mass, spectrometry, maldi, tof, time, flight, bacteria, microorganism, virus, microbe, *silico*, computer, probability